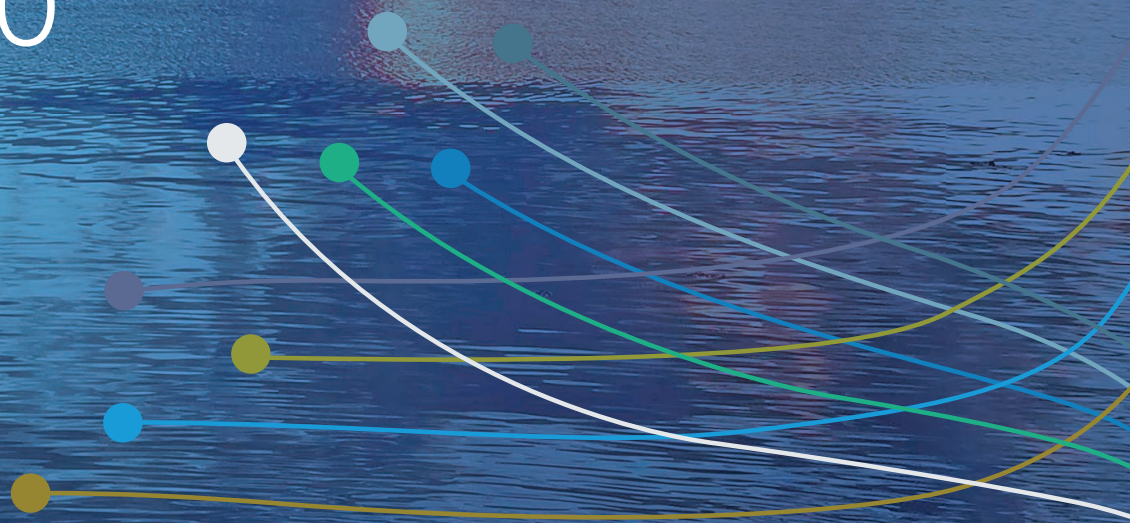




*Foras na Mara*  
*Marine Institute*

# Year in Review 2020







# Building ocean knowledge; Delivering ocean services

**The Marine Institute is a national agency with the following mission:**

The Marine Institute provides government, public agencies and the maritime industry with a range of scientific, advisory and economic development services that inform policy-making, regulation and the sustainable management and growth of Ireland's marine resources. The Institute undertakes, coordinates and promotes marine research and development, which is essential to achieving a sustainable ocean economy, protecting ecosystems and inspiring a shared understanding of the ocean.

## Our Vision

The Marine Institute, as a global leader in ocean knowledge, empowering Ireland and its people to safeguard and harness our ocean wealth.

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**Page 15** – Julien Behal

**Page 16** – Sea To Me

Selene Hoey, Tomasz Szumski, Cathy Lychehaun, Alice Hunt, Jack Kennedy, Graham Johnston, Debbi Pedreschi, Tomasz Dabrowski and Eugene Mullins



# Message from the CEO

## Dr Paul Connolly

I am delighted to present *A Year in Review 2020*, a snapshot of some of the Marine Institute's many highlights and achievements during an eventful year.

2020 was a year like no other in living memory. The Institute's response to the challenges presented by Covid-19 was made possible by the resilience and dedication of our people. Our core values as a team and as an organisation were to the fore: commitment, integrity, excellence, innovation, collaboration, and respect.

Despite the impacts of Covid-19, the Institute continued to deliver high-quality scientific advice and services to the Department of Agriculture, Food and the Marine (DAFM), along with other government departments, agencies and stakeholders. These services are essential to achieving a sustainable ocean economy, protecting and managing our marine ecosystems, and meeting EU obligations.

Brexit demanded significant attention across our service areas. Fisheries Ecosystems Advisory Services (FEAS) provided advice and analysis to DAFM on the potential impacts of Brexit for fisheries and the fishing community. The Irish Maritime Development Office (IMDO) worked closely with the Department of Transport to advise on the likely consequences of Brexit for ports and shipping. Some 22 new or extended shipping services have been established, strengthening Ireland's connectivity to international markets. Meanwhile the workload of our Fish Health Competent Authority Office has increased substantially owing to new export requirements and health certification for live shellfish and fish products transiting to EU markets via the UK landbridge. The Institute will continue to support our clients in adapting, as we adapt ourselves, to the impacts of Brexit in 2021.

Other highlights detailed here include publication of the annual Stock Book with the latest scientific advice on 74 key fish stocks of interest to Ireland. Work on mapping our ocean continued, with 6,799km<sup>2</sup> of the Celtic Sea being mapped under the INFOMAR programme. Our research vessels, the *Celtic Explorer* and *Celtic Voyager* completed 525 survey days at sea, while in Vigo, Spain, work continued on the new DAFM-funded €25 million state-of-the art research vessel, *Tom Crean*. Due to come into service in 2022, construction of the 52.8-metre vessel has progressed on time and on budget.

Research is a key activity of the Marine Institute, as we are both a research funder and research performer. Our Funding Office administered €5.3 million in new research investments in 2020, while our staff were successful in winning €2.1 million in EU research funding for the Institute.



Dr Paul Connolly, CEO of the Marine Institute

Another impact of the pandemic was the cancellation of SeaFest and European Maritime Day. These flagship public-facing maritime events were due to be hosted by Cork in May. Our communications team quickly refocused by creating an innovative, ten-week *Oceans of Learning* campaign, which showcased our work right across the Institute. The campaign delivered an impressive 134 educational resources (available at [marine.ie](https://marine.ie)) and brought together 23 partners from across the marine sector.

Finally, we set out in 2020 to redefine and enhance our relationship with key partner agencies and I am pleased to report highly productive engagements with a range of national agencies through 2020.

My sincere thanks to all of our partners and stakeholders, and to the staff of the Marine Institute, whose sense of teamwork and dedication has never been more evident than in this past year. We look forward to continuing to progress our activities in 2021 with your support.

Dr Paul Connolly

CEO of the Marine Institute

# Year in Review

## – Snapshot of 2020 in the Marine Institute

### €5.3 million

The amount of new research investments awarded under the Marine Institute's Marine Research Programme, including €3 million for ship-time and €2.3 million for research and innovation actions.

### 19.7%



The overall reduction in energy consumption by the Institute since 2009 (based on 2019 consumption figures).

### 6,799km<sup>2</sup>



The area of seabed mapped in the Celtic Sea by the Marine Institute as part of the INFOMAR programme undertaken in partnership with Geological Survey Ireland.

### 525



Survey days undertaken collectively in 2020 by research vessels *Celtic Explorer* and *Celtic Voyager*.

### 4.8 million

The media reach of Oceans of Learning campaign. 134 educational resources were developed and promoted, with a social media reach of 750,000.

### 7



New Cullen PhD scholarships, with a total funding of €700,000, were announced in 2020. The scholarships are due to run over the next four years.

### 16



The number of years that the Institute has continuously held the prestigious Excellence Through People accreditation. It retained it again in 2020, at Gold Standard.

### 3,354



Seawater samples were analysed via microscopy for toxic and harmful phytoplankton species by the Marine Institute.

### 19



Shipwrecks were surveyed offshore in the Celtic Sea as part of INFOMAR's survey operations.

### 424,000



Fish and shellfish were measured during the Data Collection Multiannual Programme (DCMAP).



# Scientific Advice and Services

A wide range of scientific advice and services are provided by the Institute to government departments, agencies and stakeholders. These services play a vital role in protecting and managing our ecosystems, meeting EU obligations and achieving a sustainable ocean economy.

## **A year of significant change for fisheries science and advice**

2020 was a year of enormous change for Irish fisheries and the scientific programme, which underpins the scientific advice on fish stocks. Throughout the year, support was provided to DAFM, as the Brexit negotiations extended from January and reached a peak of activity in the final days of the year. December Council and the role of science in supporting the proposals for Total Allowable Catches (TACs) in 2021 was significantly altered by the new dimension of the UK exiting the EU.

The International Council for the Exploration of the Sea (ICES) assessment and advisory process was adjusted to account for travel restrictions arising as a result of the Covid-19 pandemic.

The Institute response to these changes and challenges was effective and efficient with assessments undertaken, advice for fish stocks issued, and the Institute produced its Annual Stock Book.

## **First annual Fish Health Unit activity report published**

The Marine Institute's Fish Health Unit, working with colleagues in the Department of Agriculture, Food and the Marine veterinary services, conduct regular health surveillance of fish and shellfish farms in Ireland. In June, the Institute published its first Fish Health Unit activity report, increasing awareness and transparency of its work in this area. Covering the period 2018-2019, the report highlighted a high level of compliance by industry with EU and national aquatic animal health regulation in Ireland.

The report outlined the fish health inspection and monitoring activities in this period and showed that a total of 384 health surveillance inspections of aquaculture production businesses were undertaken. 98 per cent of these had no compliance issues or compliance issues that were categorised as minor.

## The Stock Book Leabhar Na Stoc

November 2020



Annual Review of Fish Stocks in 2020  
with Management Advice for 2021

Léirmheas Bliantúil ar na Stoc Éisc in 2020  
le Comhairle Bainistíochta do 2021



Annual Stock Book 2020, presented to the Minister for Agriculture, Food and the Marine

### Marine Institute Seafood Safety Programmes

During the year, 3,354 seawater samples were analysed via microscopy for toxic and other harmful phytoplankton species. These seawater samples, in combination with shellfish samples from all production areas around the coast, were continuously monitored for toxicity and microbiological status under our national Shellfish Safety programme. This supported the provision of essential seafood safety advice to allow the placing on the market of safe, high quality product.

In 2020, 172 test reports were carried out for cadmium in whole crab for export following rapid turnaround analysis required by the Sea Fisheries Protection Authority (SFPA). Additionally, fish landings were sampled at various ports for testing of a wide range of environmental contaminants, as part of a multi-annual programme.

### National Marine Planning Framework

Throughout 2020, the Institute provided significant support in the preparation of the National Marine Planning Framework for the Department of Housing, Planning and Local Government (renamed Department of Housing, Local Government and Heritage in September 2020).

This included the identification and collation of relevant datasets, data analysis, implementation of data governance practices and preparation and publication of maps to Ireland's Marine Atlas ([atlas.marine.ie](https://atlas.marine.ie)). These data were essential in producing the draft framework, which was the result of extensive work across government and of significant engagement and interaction with all marine stakeholders over a two-year period.

### 20 years of benthic monitoring of aquaculture Sites

2020 marked the 20th anniversary of the implementation of the benthic fish-farm monitoring protocol, introduced by the then Department of Marine and Natural Resources as one of a series of protocols to monitor fish farming activities in Ireland. An annual benthic monitoring survey forms a part of this protocol. The surveys are conducted to ensure operations are not having an undue impact on the seafloor beneath fish farming cages.

In the event of a breach of the allowable impact levels, suitable management modifications are implemented by the operator as instructed by Department of Agriculture, Food and the Marine to reduce the impact and allow a suitable degree of recovery of the benthic environment. During the past 20 years, including 2020, the Marine Institute has submitted a full monitoring report of sites to DAFM.





Phytoplankton samples and incubators. Photo: Andrew Downes



# 155 Days

Spent by Marine Institute staff collecting data on commercial catches during 2020. This data provides advice that is central to the sustainable exploitation of these species.

## Advice on Maritime Transport

The combined effects of Covid-19 and Brexit brought the strategic importance of Ireland's maritime industry to the fore. The IMDO issued the 17th edition of the Irish Maritime Transport Economist (IMTE) in 2020, which continues to be an invaluable time series of data on which much of the advice issued by the IMDO to the Department of Transport is based. This enabled the IMDO to prepare evidence based research to inform policy decisions and assist in protecting the resilience of the maritime industry. The data in the IMTE also provided the basis for the Review of the Landbridge Report and Connectivity Study, which were completed during the year.



# 1,545

Scientist days spent at sea during 2020, focusing on a broad range of species including mackerel, blue whiting, herring, anglerfish, megrim, Nephrops, cockles, scallop and lobster.



# Forecasting Ocean and Climate Change

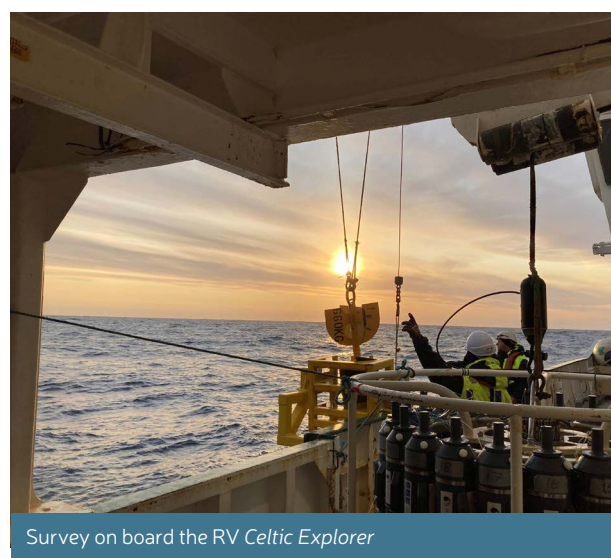
The Marine Institute works with national and international partners to observe and understand how our ocean is changing, to respond to current patterns of change, and to model likely future scenarios

## Observation and Climate activities

Following the procurement and delivery in 2019/2020 of the Science Foundation Ireland co-funded infrastructure components of the EirOOS ocean observing system (Ireland's contribution to the European Ocean Observing System), 2020 saw the deployment and commissioning of several infrastructure platforms.

It also saw a range of oceanographic and climate change missions and research activities in coastal and deep waters off Ireland to increase national and global data collection coverage efforts to improve modelling of ocean and climate change. These activities included:

- Glider missions, to collect important oceanic data, off the coast of Ireland
- Deployment of three Argo floats, measuring temperature and salinity through the water column down to a depth of 2,000 metres
- Deployment of three shelf edge moorings off southwest Ireland
- Deployment of a pCO<sub>2</sub> sensor on the SmartBay Observatory to monitor carbon concentrations in the waters of Galway Bay
- Upgraded Irish Marine Data Buoy Observation Network (IMDBON) platforms around the coast continued to provide hourly measurements of metocean parameters to the global weather forecasting and oceanographic community
- Development/delivery of a range of operational modelling services and a downscaled climate model for the coastal ocean for southwest Ireland
- The Institute contributed Essential Ocean/Climate Variable information to the Environmental Protection Agency (EPA) – Met Éireann – MI Climate Status Report for Ireland (to be published in early 2021).



Survey on board the RV Celtic Explorer



Glider being deployed during a survey. Photo: Tomasz Szumski

# Research and Innovation

The Institute supports, coordinates and promotes marine research and innovation at national and international levels. It is also a research performer, participating in and leading national and international research partnerships. Just a few examples from 2020 are included below.

## €5.3 million in research awards granted under the competitive Marine Research Programme

In 2020, the Institute's Research Funding Office managed €5.3 million in new research investments awarded under the Marine Institute's Marine Research Programme. This included €3 million for ship-time access to the research vessels and remotely operated vehicle, and €2.7 million on research projects.

The total research investment in the programme from 2014 to 2020 now stands at €51.7 million and accounts for 355 awards with 102 still active at year-end.

Nine new scholarships were awarded in 2020 calls, seven under the Cullen Scholarship programme and two under the Eoin Sweeney Scholarship programme in collaboration with the Oceanic Platform of the Canary Islands (PLOCAN). The total investment is €900,000.

## Technology development and research into new species in Irish waters

2020 was a year of significant development in research using new technology to gain insights into the movements of marine animals in Irish waters. The SeaMonitor project (supported by €1.4 million in funding from the EU INTERREG VA programme) developed Europe's largest telemetric marine array to track the movements of marine fish, seals and cetaceans. The array was deployed to the north of Ireland and west of Scotland, with over 30 acoustic listening devices to track the movements of tagged fish.

An autonomous underwater vehicle has also been successfully deployed to remotely survey large areas of the Malin Shelf and west of Scotland for acoustically tagged fish. The Bluefin tagging programme had its most successful year, with a further 25 fish tagged with satellite tags, allowing marine scientists to get detailed data on the annual movements of these large ocean predators over the entire North Atlantic and for periods of up to a year.

## Launch of National Database of Marine Research

A new online National Marine Research Database was launched in July displaying more than 500 marine research projects that have received combined funding of over €230 million from national and international competitive funding programmes. The collection and analysis of national marine research investment data has been carried out in collaboration with the Marine Research Funders' Forum (MRFF), which convened twice in 2020.

Coordinated by the Marine Institute, the Forum brings together 24 state organisations with the aim of enhancing coordination in marine related research funding, whilst also addressing a number of the implementing actions set out in the strategy. The database and Forum are key actions delivered under the National Marine Research and Innovation Strategy 2017-2021.

## The IMDO working with 5 new EU funded maritime projects

In 2020, the Irish Maritime Development Office (IMDO) started work on five new important projects, funded by the EU. The project topics range from reducing harmful emissions from ships when they are in port, to transforming port logistics by integrating existing data sets to drive efficiency and competitiveness.

The latter project will, on a pilot basis, create an International Fast and Secure Trade Lane (IFSTL) between Dublin and Cherbourg. The pilot study will establish the procedures and principles that will optimise the performance of key elements of port operations, and once proven, these procedures and principles can be rolled out to other ports throughout Europe. Potential stakeholders include: ports, shipping companies, terminal operators, inland transport providers and regulatory authorities.

8

€2 million +

Secured from externally funded research awards during 2020



## Two important and transformative maritime research projects

Evidence based research underpins all of the advice provided by the IMDO. This advice informs policy and influences the development of the Irish maritime industry. In 2020, two significant new research projects were commenced. The first relates to a study that will develop a roadmap to port sustainability. This important work is linked to broader EU ambitions to reduce carbon emissions and guide ports towards more sustainable development.

The second project, investigates the socio-economic value of Irish ports. This research will make a valuable contribution to the next Review of National Ports Policy, which is likely to commence before the end of 2021.

## Aquaculture research development

The recently completed Recirculation Aquaculture System (RAS) at Newport was used to great effect in 2020 to support two aquaculture projects: Salmson smolts, which is producing fitter smolts, and HYDROFISH, which is using fish protein hydrolysate products to boost the salmon immune system and strengthen the gut to improve resistance to pathogens and disease.

The Lehanagh Pool Marine Research Site at Beirtreach Bui Bay in Connemara, Co. Galway, was used to support two Integrated Multi Trophic Aquaculture (IMTA) projects bringing in an investment of almost €1 million funded through the EU H2020 BlueBio call. The Marine Institute

continues to partner with Bord Iascaigh Mhara (BIM) and Údarás na Gaeltachta to bring forward initiatives to ensure that the results of the research are transferred to industry and provide practical support to its sustainable development.

## Marine Institute Research Symposium

More than 100 Marine Institute staff attended the online Research Symposium over two days in December. This was the second year of the symposium, designed for researchers from across the Institute to present their research and to stimulate integration of research across service groups. The Symposium moved online due to Covid restrictions and all presentations were pre-recorded. Organised by the Research Matrix Team, the Symposium has become an important annual event to enhance cooperation between researchers across the Marine Institute service areas.



Some of the attendees at the virtual Marine Institute Research Symposium (9th December)



Aquaculture research site in Lehanagh Pool, Connemara

# Ireland's Ocean Economy

In partnership with other agencies that underpin and promote sustainable economic development, the Marine Institute supports Ireland's ocean and coastal economies through its research, ocean knowledge, infrastructure, advisory and regulatory services and maritime development opportunities.

## Marine Ireland Industry Network - new website and directory go live

The Marine Institute provided funding and support to develop an online presence for the Marine Ireland Industry Network (MIIN).

The Network (previously known as IMIN) is made up of a diverse array of companies, state organisations, research groups and higher education institutes, working in Ireland's blue economy. A multi-stakeholder steering group, led by Enterprise Ireland, oversees the coordination of MIIN and its activities and initiatives. These are focused on building collaboration and providing opportunities for member companies to showcase their products, services, recent achievements and successes to industry, researchers and international companies.

By end of 2020, 98 companies/organisations had signed up to the online MIIN directory available on [marine-ireland.ie](https://marine-ireland.ie). Assets that were developed in 2020, such as the website, directory and social media platforms, help showcase MIIN nationally and internationally, offering a vantage point where national capabilities in the marine and maritime sectors (Ireland's Blue Edge) can be showcased under the Marine Ireland brand identity.

## 22 new or expanded shipping services

Brexit created extraordinary challenges for Irish ports and for the shipping companies servicing the Irish market. Preparations for Brexit began in the IMDO four years ago - engaging with ports and shipping companies to stimulate interest in establishing new services to protect Ireland's connectivity in a post-Brexit environment. That engagement resulted in inward visits from other EU ports and the commencement, expansion of shipping service and the development of new routes.

In summary, the response from the maritime industry to protecting Ireland's connectivity has been unprecedented, involving 22 different interventions that increased frequency and capacity and provided greater choice for all Irish importers and exporters.



Container ship in transit. Photo: David Branigan



# Our People

The Marine Institute is committed to supporting a culture of high performance, driven by our people, whose skills, experience and passion for the marine are central to the work we perform for Government and other stakeholders.

The Institute's response to the Covid-19 pandemic highlighted the agility and flexibility of its people. All work programmes and essential service delivery have continued and the transition to a significant element of remote working has been smooth. This is a credit to the commitment, engagement, energy and effort of staff across the Institute and the leadership and culture which drives and enables those qualities.

# 16

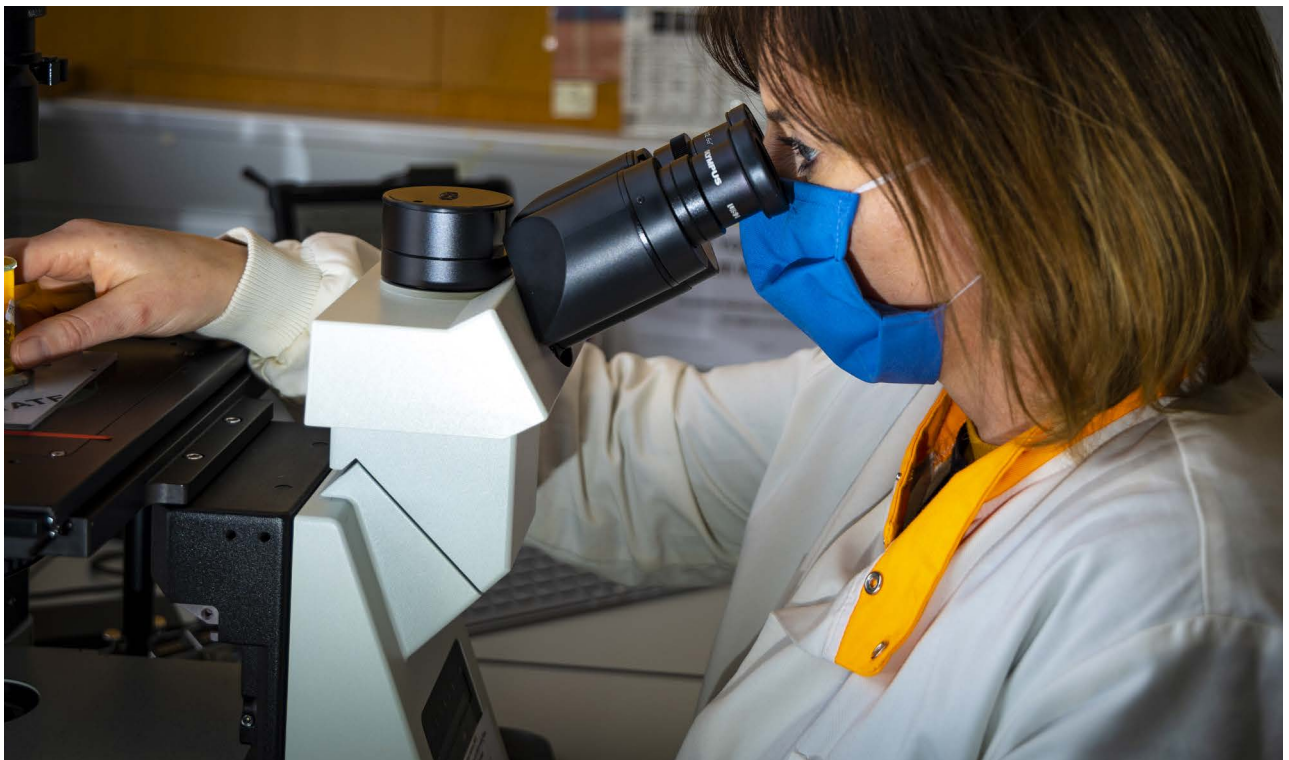


The number of years that the Institute has continuously held the prestigious Excellence Through People accreditation. It retained it again in 2020, at Gold Standard.

Wellbeing, managing teams remotely, mental health and building resilience were key foci for the Human Resources and Senior Leadership Team with internal communications initiatives and extensive training and supports provided.

The Institute again retained the Excellence Through People (ETP) Certification under the NSAI Standard – ETP 1000:2017. ETP is Ireland's only national human resource management scheme dedicated to the role of people, and the positive impact on business when you focus on valuing and engaging with people for collective success. The Marine Institute has held this prestigious award continuously since 2005.

The Institute ended the year on a high. We walked, ran, rowed, swam and cycled the equivalent 4,068km distance from our headquarters in Galway to the North Pole over a period of three weeks, whilst fundraising for the RNLI. Throughout the wet and dark nights, our People came together for this very worthy charity with great enthusiasm and energy.



Annaclaire McCarthy, laboratory analyst in the Shellfish Safety Section of the Institute. Photo: Joe Silke

# Infrastructure

The Marine Institute operates national infrastructures that provide essential platforms for its government services, national and international research and early technology development. These assets include nine Marine Institute facilities, two multi-purpose research vessels, a deep water Remotely Operated Vehicle, IT infrastructure and data, mobile and fixed oceanographic equipment as well as test and demonstration platforms, and more.

## RV Operations

The RV *Celtic Explorer* completed a full survey schedule of 297 survey days in 2020, meeting all in-house survey requirements, ship-time funded programmes and external funded surveys. Following the establishment of revised operating procedures, the RV *Celtic Voyager* completed a full survey schedule from mid-May onwards delivering a total of 228 survey days.

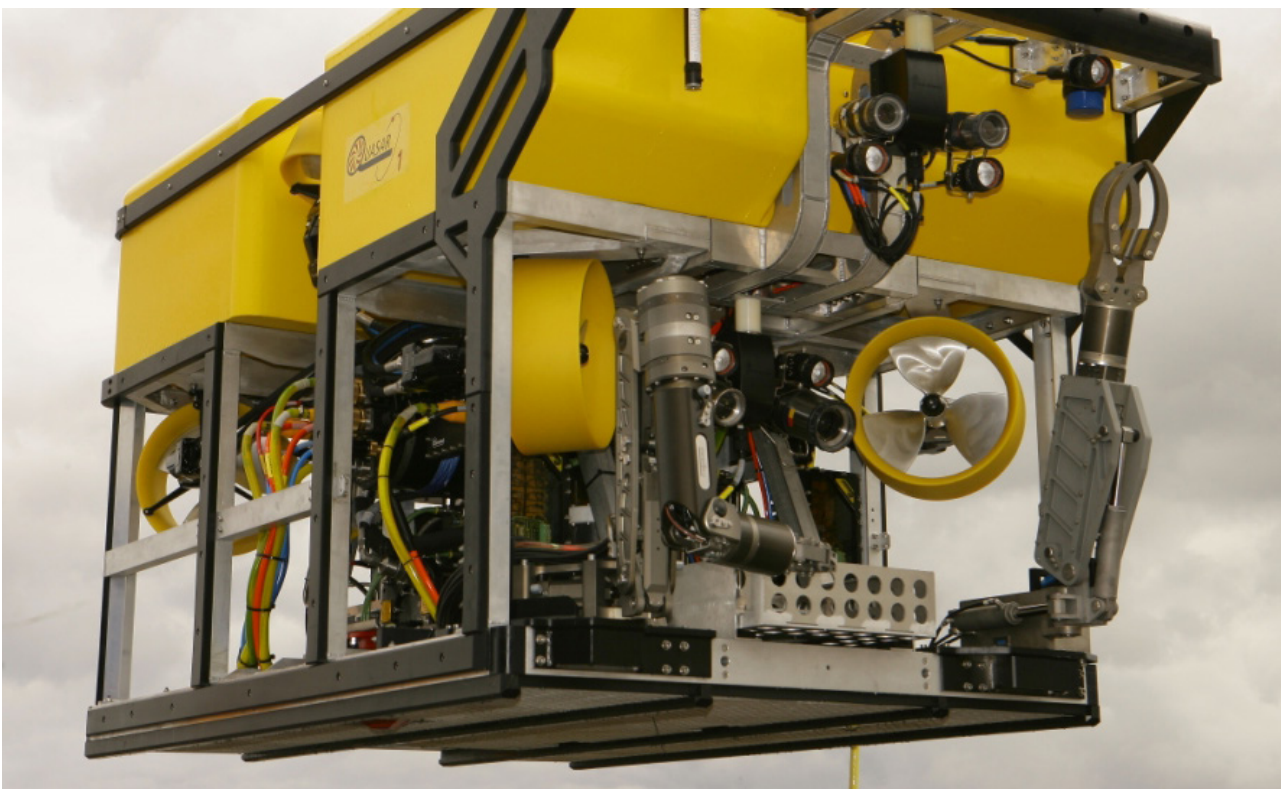
The ROV *Holland 1* completed one 16 day science survey. 6,799km<sup>2</sup> of seabed was mapped on board the Celtic Voyager and Celtic Explorer in the Celtic Sea by the Institute, as part of the INFOMAR programme undertaken in partnership with Geological Survey Ireland.

Observational infrastructures provided by the Institute include data buoys as part of the Irish Marine Data Buoy Observation Network, gliders, tide gauges and cabled observatory.

# 525



Survey days undertaken collectively in 2020 by research vessels *Celtic Explorer* and *Celtic Voyager*.



ROV *Holland 1*, the Institute's deepwater remotely operated vehicle. Photo: Aodhán Fitzgerald



RV *Tom Crean*

## New research vessel *Tom Crean*

The RV *Tom Crean*, a 52.8 metre multipurpose research vessel, will replace the RV *Celtic Voyager*, when it comes into service in 2022. The new marine research vessel will enable the Marine Institute to continue to lead and support the highest quality scientific surveys that contribute to Ireland's position as a leader in marine science.

It will enable 300 operational days at sea each year and up to 3,000 scientist days per year, and will provide a year-round service for expanded fisheries and ecosystem surveys, seabed mapping, deep water surveys and support increased research in the Atlantic Ocean.

The vessel will bring additional capability beyond that offered by the *Celtic Voyager*, as it is designed with an extended range and to accommodate a larger number of personnel (14 scientists, 12 vessel crew), to handle larger and more complex equipment, and to operate safely in higher sea states than the current vessel.


The *Tom Crean* has been designed to meet the stringent ICES 209 requirements of for underwater radiated noise, to allow the vessel to operate as quietly as possible. The vessel is also designed to operate in an energy efficient manner in all operational conditions.

The vessel has been designed by Skipsteknisk AS of Norway and is currently being built by Astilleros Armon, Vigo, Spain. The keel of the vessel was laid in November 2020 and it's planned to launch the completed hull in 2021, with the vessel being fitted out afloat before final delivery in 2022.

### Our progress to “Get Greener”

The Marine Institute “Get Greener” team continued to engage with our People to promote efficiency in energy usage and encourage more sustainable operating practices at home whilst remote working, working in the field, or onsite in our facilities.

The Institute completed its Resource Efficiency Action Plan for 2019-2021, which consolidated progress and assessed future actions. A Register of Opportunities with actions for potential energy reduction has been compiled and items will be prioritised and implemented on a phased basis.

**19.7%** 

The overall reduction in energy consumption by the Institute since 2009 (based on 2019 consumption figures).

# Data and IT

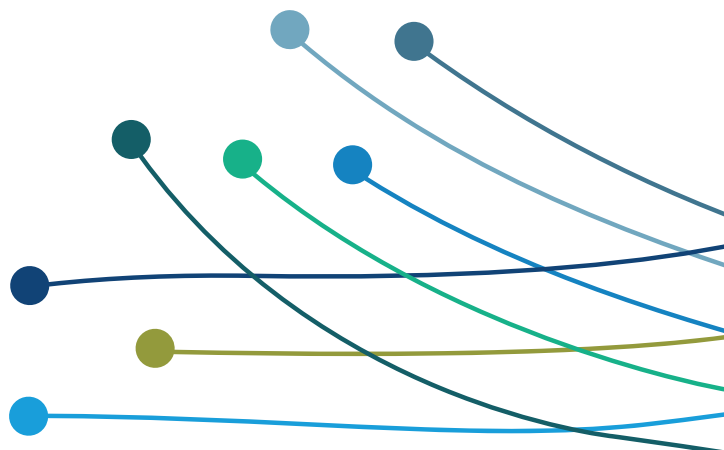
Data is the foundation for the Marine Institute's evolving integrated advice and services portfolio and how it supports integrated maritime policy at national, EU and international levels.

## Data and IT roadmap implementation

Extensive upgrades to the Marine Institute's remote working, cyber security and network resilience capabilities were carried out in 2020 to facilitate the move to remote working.

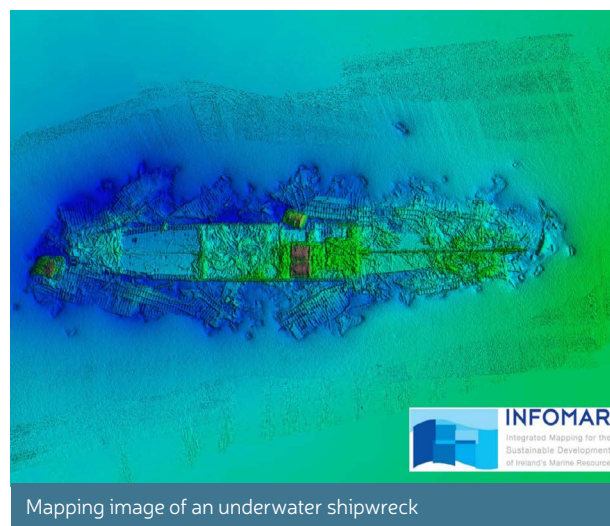
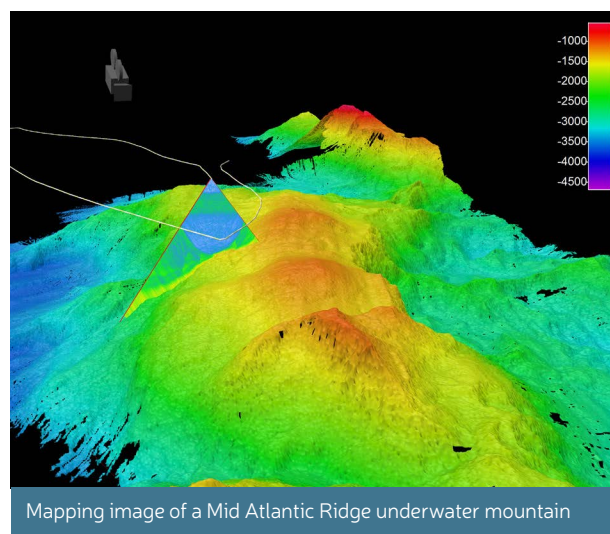
Data is managed with the support of the Marine Institute's data Quality Management Framework. Data and information services were enhanced to provide additional access to a range of scientific and research data and information including:

- The Harmful Algal Blooms (HABs) database and website ([webapps.marine.ie/habs](http://webapps.marine.ie/habs))
- Coordination of data for Marine Spatial Planning and the Marine Strategy Framework Directive
- Automation of chemistry data flows in field and lab and to enhance reporting to clients and international data centres
- Development of a Benthos Ecology SQL database, which will allow benthic data to be stored securely and queried easily
- Data from a wide range of organisations was converted to maps for the National Marine Planning Framework and the maps were also published online through Ireland's Marine Atlas ([atlas.marine.ie/](http://atlas.marine.ie/)), the Marine Institute data catalogue ([data.marine.ie](http://data.marine.ie)) and the national data catalogue ([data.gov.ie](http://data.gov.ie))
- The IODE-accredited Marine Institute Data Management Quality Management Framework was extended and made available to Irish Spatial Data Exchange partners
- Fisheries Ecosystems Advisory Services (FEAS) continued to guide the development of the new ICES Regional Database & Estimation System (RDBES)
- Phase two of the cross services project to design data tools, processes, and products to allow fisheries data to be more easily explored and better understood by stakeholders



## Digitisation of historical fisheries reports

Fisheries Ecosystems Advisory Services (FEAS) and the Oceanus Library collaborated to digitise and make available two important historical collections from the Marine Institute archive: Sea and Inland Fisheries reports from 1852-1987, and the Scientific Investigations collection which spans from 1901-1926. This interactive archive is available on [marine.ie](http://marine.ie) and we continue to add features to the archive as the project progresses.





# Engagement and Education

Initiatives in engagement and education focus on increasing awareness and participation amongst citizens, communicating science and ocean knowledge and, encouraging a new generation of ocean professionals who will become leaders and champions for the marine environment.



## Engagement and Education Highlights of 2020

With the cancellation of SeaFest and European Maritime Day in 2020, the Institute developed a major ocean communications campaign. The ten-week Oceans of Learning campaign included 134 educational resources developed on a range of marine topics, with 23 partners sharing news and online activities (including videos and downloadable resources). All resources are available on [marine.ie](https://marine.ie).

The Explorers Education Programme team re-trained and adapted their delivery methods during school closures to enable them to deliver marine-themed modules to primary schools in Sligo, Donegal, Mayo, Galway, Clare, Kerry, Cork, Waterford, Dublin and Wicklow, reaching approximately 6,000 students. Additional online resources were also developed and teacher training was delivered virtually to 400 teachers and almost 700 student teachers. The Marine Institute's efforts in engagement and education were also recognised in 2020 with Galway City Museum and Our Sea Science Gallery being recognised by Tripadvisor as a Top Tourist Attraction in Ireland.

The vital role of the ocean and actions to safeguard it for future generations were brought into focus when our CEO was delighted to represent the Institute in conversations on the importance of the oceans with Their Royal Highnesses, The Duke and Duchess of Cambridge, during their first official visit to Ireland in March 2020.

The IMDO partnered with the Commissioners for Irish Lights (CIL) to provide training berths for students in the National Maritime College of Ireland. Sea training is mandatory for trainee deck officers and engineers, but Covid 19 created challenges throughout the shipping industry in securing trainee berths. In an innovative scheme, part funded by the IMDO, CIL provided vitally important berths on the ILV Granuaile, enabling NMCI to graduate in 2020.

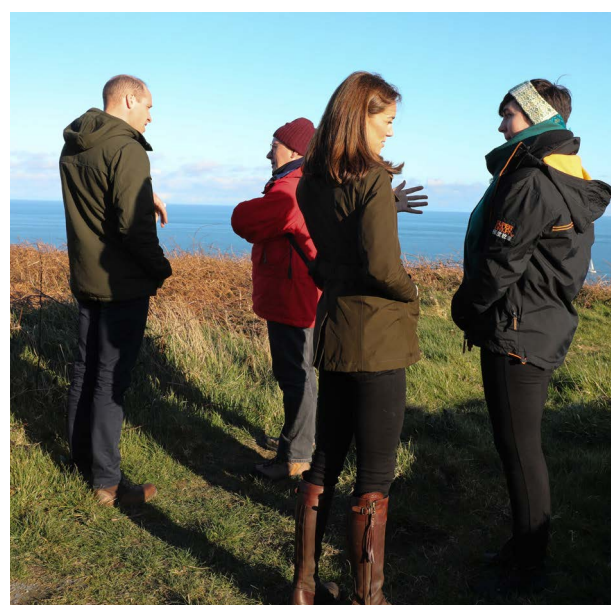
The SMART (Strategic Marine Alliance for Research and Training) programme for training third level students on board the research vessels continued, with some innovative online elements through 2020.

## Citizen Engagement on EU Mission for Healthy Oceans, Seas, Coastal and Inland Waters

In 2020, the Marine Institute coordinated a national citizen engagement exercise, with the European Commission, in support of the candidate Horizon Europe mission on Healthy Oceans, Seas, Coastal and Inland Waters. The citizen survey provided very useful insight into four areas:

- Levels of exposure to / interaction with blue spaces
- Opinions on marine issues
- Concerns and policy priorities
- Ocean knowledge and sources of information

The report on the citizen survey is due to be published in 2021 and all outputs will be used to inform the preparation of the next National Marine Research & Innovation Strategy, due to get underway the same year.



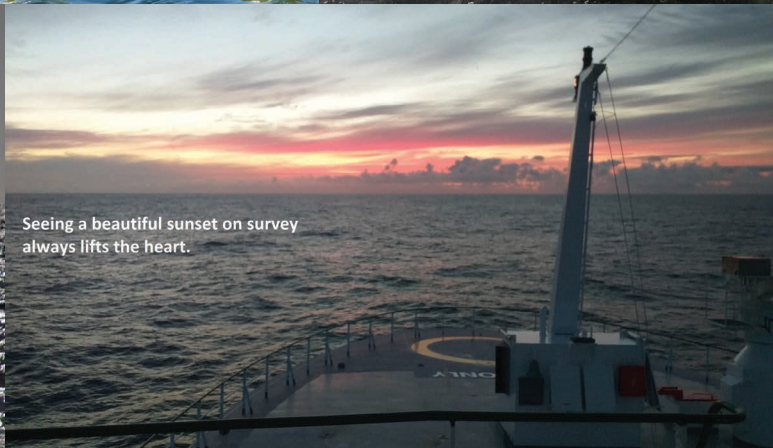
The Duke and Duchess of Cambridge with Dr Paul Connolly, Marine Institute, and All-Atlantic Ocean Youth Ambassador Eimear Manning. Photo: Julien Behal





# #SeaToMe

A #SeaToMe social media campaign was launched as part of the Marine Institute's Oceans of Learning series, asking people across Ireland to share what the sea means to them. From stunning photos and fantastic artwork to inspirational quotes and poetry, hundreds of people responded showcasing the many different relationships we all have with our sea.



Seeing a beautiful sunset on survey always lifts the heart.



# Appendix

## EU-funded Research - Marine Institute Project Participation in 2020

Project Name	EU Funding Programme	Total project funding awarded to Marine Institute*
<b>Projects active (or new) in 2020</b>		
5-G HEART	H2020	€173,365
Alertox-Net	Interreg - Atlantic	€190,440
ASTRAL	H2020	€843,346
Blue Bio CoFund	H2020	€359,552
BLUEFISH	Interreg	€1,138,802
CE2Coast	JPI MI	€200,000
CIRCLES	H2020	€81,875
Clean Atlantic	Interreg - Atlantic	€267,357
CMMI- Maritec-X	H2020	€1,177,570
CoClima	EPA JPI	€325,000
Compass	Interreg - VA	€1,623,709
Ealing	CEF	€51,791
EU Marine Robots	H2020	€251,161
Euro Argo RISE	H2020	€134,720
Eurofleets +	H2020	€1,046,625
EuroSea	H2020	€433,744
ForCOAST	H2020	€100,000
Groom II	H2020	€180,313
iFADO	Interreg - Atlantic	€347,143
IMPAQT	H2020	€557,908
International Fast & Secure Trade Lanes - IFSTL	CEF	€164,500
Jerico DS	H2020	€187,937
JERICO S3	H2020	€352,560
MarTERA	H2020	€287,843
MEESO	H2020	€379,540
Mission Atlantic	H2020	€553,125
MyCoast	Interreg - Atlantic	€146,460
OceanDEMO	Interreg - N-W E	€244,200
Primrose	Interreg - Atlantic	€515,940
SEA DATA CLOUD	H2020	€119,375
SeaMonitor	Interreg - VA	€1,042,984
WATexR	EPA JPI	€239,000
<b>Projects completed in 2020</b>		
TAPAS	H2020	€542,473
EMSOLINK	H2020	€429,367
Vivaldi	H2020	€118,809
AORA	H2020	€1,625,182
<b>Total Funding to Marine Institute (multi-annual)*</b>		<b>€16,433,716</b>

\* Almost all projects are multi-annual in duration. The funding amounts shown represent total project funding to the Marine Institute utilised across the full duration of the project (i.e. not only in 2020)



*Foras na Mara*  
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